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Noxious Times

A Quarterly Publication of the California Interagency Noxious Weed Coordinating Committee

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Legislative Update: NIWAW 7 & S 144

The Seventh Annual National Invasive Weeds Awareness Week (NIWAW 7) was held in Washington, DC the week of February 26 to March 3, 2006, to bring people and organizations from across the country together to focus national attention on the severe problems created by invasive weeds. NIWAW 7 events were designed to focus on the importat roles the Federal government must play to help the U.S. deal with invasive weed problems. With a schedule designed to provide ample time for attendees to meet with their Congressional delegations, individual federal agencies, and each other.

The California Invasive Weeds Awareness Coalition (CALIWAC) sent a team again this year to request full appropriation of the $15 million authorized by Senate Bill 144, which was signed into law in 2004 as the Noxious Weed Control and Eradication Act (NWCEA). The law authorizes $15 million in appropriations to control invasive weeds. To date, no funds have been appropriated to put the law into action.

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Herbicide Registration *for dummies*

by Cheryl Woods & Robert Leavitt, CDFA

Herbicide use has been controversial for decades. In truth, they are much safer and more thoroughly tested today than ever before. The most common herbicides in use today, such as glyphosate, are considered safe for people and the environment when administered properly. This is largely due to advances in the sophistication of the herbicide industry and the intense scrutiny given to today's herbicides before they are registered. Though pesticide use was minimal before World War II, chemical pesticides have been under government control since the Insecticide Act of 1910 (Plater, Environmental Law and Policy, p 819). This act addressed consumers' main concerns of the time: ineffective products and deceptive labeling. Since heavy pesticide use had not begun before the late 1940s stringent regulations were not necessary. Regulations on pesticides have evolved with the manufacture and increased use of the products. After World War II, the pesticide market grew substantially and Congress declared that pesticides fell under the Interstate Commerce Clause, and therefore, under federal regulation.

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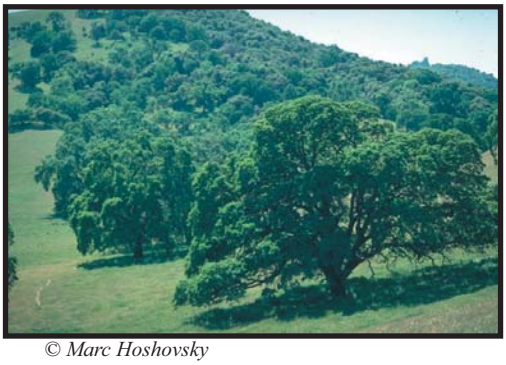
CINWCC Signatory Agencies and Representatives

California Agricultural Commissioners and Sealers Association
Mary Pfeiffer (530) 224-4949
California Department of Food and Agriculture
Larry Bezark (916) 654-0768
Steve Schoenig (916) 654-0768
California Department of Transportation
Sheree Edwards (916) 654-5784
California Resources Agency
Susan Ellis (916) 445-9992
California State Parks
Cynthia Roye (916) 653-9083
Department of the Army, U.S. Corps of Engineers, South Pacific Division
Phil Turner (415) 977-8058
State Coastal Conservancy
Maxene Spellman (510) 286-1015
U.S. Department of Agriculture, Natural Resources Conservation Service
Dave Dyer (209) 727-5319
U.S. Department of Agriculture, Animal and Plant Health Inspection Service
Dan Hamon (916) 857-6258
Carolyn Pizzo (916) 857-6272
U.S. Department of Agriculture, Forest Service
Cheri Rohrer (415) 705-2545
U.S. Department of Defense, Air Force
Mary Lamb (415) 977-8851
U.S. Department of Interior, Bureau of Indian Affairs
Dale Morris (916) 978-6051
U.S. Department of Interior, Bureau of Land Management
Diana Brink (916) 978 4645
John Willoughby (916) 978-4638
U.S. Department of Interior, Bureau of Reclamation
Michael Nepstad (916) 978-5041
U.S. Department of Interior, Fish and Wildlife Service
Sam Johnson (360) 696-7621
U.S. Department of Interior, National Park Service
Bobbi Simpson (415) 464-5294

Stakeholders

California Association of Nurserymen and Garden Centers
Bob Falconer (800) 748-6214 (ext. 17)
California Cattlemen's Association
Ken Zimmerman (562) 866-1400
California Invasive Plant Council
Doug Johnson (510) 843-3902
California Native Plant Society
Bob Case (925) 689-6528
Don Mayall (650) 856-7579
The Nature Conservancy
John Randall (530) 754-8890
U.S. Department of Agriculture, Agricultural Research Service
Ray Carruthers (510) 559-5800
Joe Balciunas (510) 559-5975
University of California
Joe DiTomaso (530) 754-8715

CINWCC Chairperson



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Bobbi Simpson,

National Park Service

The Time is Ripe – How Do You Fit Into This Movement?

This last message is a tribute to those visionary collaborations underway in California and why I sense the invasive species field is primed to take a large leap forward in California. The past two years have been an educational process for me, and a real eye-opener regarding the diversity of invasive plant management in the state. At times it has been hard to put a finger on any trajectory or trend that would be satisfying. However, I am happy to say that in the last year, there have been great strides that make me feel that indeed the time is ripe for significant progress.

Examples of a culmination of years of work by multi-stakeholder collaborations include efforts like the successful formulation of grassroots Weed Management Areas; the drafting of an Interagency Memorandum of Understanding to require stock use of weed free hay, straw or mulch on public lands (agency participants include California Agricultural Commissioners and Sealers Association, California Department of Food and Agriculture, US Forest Service, Bureau of Land Management, National Park Service, and the US Fish and Wildlife); the recent BLM Draft Vegetation Treatment EIS and Environmental Report hopes to make available improved techniques to BLM land managers; and the NPS implementation of a specialized rapid response field team; helping national parks (and a few partners) across the state of California halt incipient invasive populations. Very recently a revival of interest to work cooperatively on an initiative to fight the eastward expansion of yellow starthistle has emerged. So far, agencies and NGOs in seven western states have expressed interest in participating in this 2008 initiative. These activities combine to make ***an amazing part of the greater movement.***

article continued on next page

Noxious Times is a publication of the **California Interagency Noxious Weed Coordinating Committee** (CINWCC). The committee was formed in 1995, when 14 federal, state, and county agencies came together under a Memorandum of Understanding to coordinate the management of noxious weeds. The committee's mission is to facilitate, promote and coordinate the establishment of an Integrated Pest Management partnership between public and private land managers toward the eradication and control of noxious weeds on federal and state lands and on private lands adjacent to public lands.

The Noxious Times newsletter intends to help the committee achieve its goals of coordination and exchange of information by providing land managers throughout the state with information on weed control efforts, news, and successes.

Noxious Times is published quarterly by staff of the Integrated Pest Control Branch at the California Department of Food and Agriculture. We welcome submissions for our upcoming issues. Please send to: CA Department of Food and Agriculture, ATTN: Noxious Times, 1220 N Street, Room A-357, Sacramento, CA 95814 or e-mail: noxtimes@cdfa.ca.gov.

If you have a colleague whose name you would like to add to our mailing list, please send mailing information to the address above.

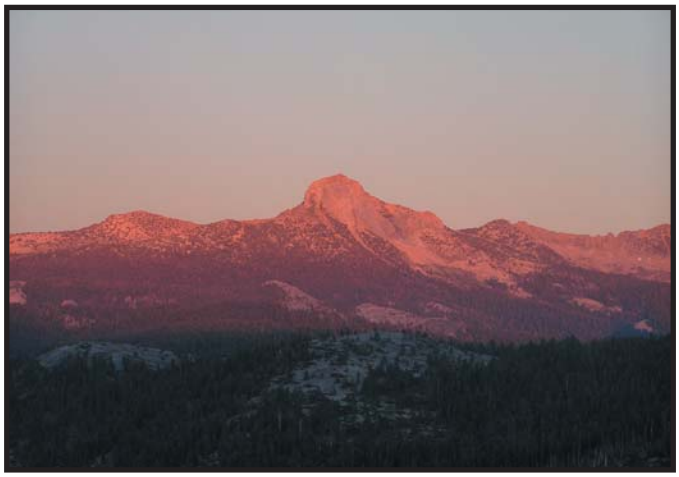
Noxious Times Editorial Staff: Steve Schoenig, Gina Skurka, Katie Filippini, and Michelle Early.
Text written by staff unless otherwise noted.

CINWCC Chair continued

The entity with the most hands on the wheel is the California Invasive Plant Council (Cal-IPC). This non-profit organization now represents the largest IPC/EPPC in the country with a membership over 1,000! This 200% increase in membership over the last three years is largely due to an amazingly talented (and sleek) staff driving the operation. Their recent overhaul of the California Invasive Plant Inventory that ranks and identifies species of greatest ecological concern was another monumental triumph. This required an enormous number of hours by subject-area experts to devise a scientifically defensible and transparent evaluation procedure. Cal-IPC's key role in networking and pushing the invasive species agenda to find solutions has manifested the creation of solid contributions to the state such as an annual symposium, field schools for practitioner development, a mapping consortium, and think-tank efforts to examine [and fill] gaps in the larger picture (research, education, policy and law). The surge in effectiveness has catapulted California into the national scene as one of the leading edge states regarding invasive species management.

An amazing part of the greater movement.

Cal-IPC has joined with the California Farm Bureau and other private sector members of the California Invasive Weed Awareness Coalition (CALIWAC). One of their primary activities is to pay close attention to what is going on in Congress and have established a rapport with "the hill" through their annual visit during National Invasive Weed Awareness Week. They have a packed schedule, visiting pivotal legislators to ensure they are well aware of the weed issues we wrestle with in California. They arrive with practical information packets to suggest solutions and funding bills that would help address this problem.



Protecting wild places, Yosemite National Park
Photo by Joshua Brown, August 2005

An amazing part of the greater movement.

The non-profit group Sustainable Conservation has joined with Cal-IPC and industry partners to target one of the most fundamental aspects of invasive plant control. They are facilitating a group called the "Partnership to Prevent Invasive Plants Introductions Through Horticulture." They are starting the dialogue of how we can address the frustrating irony of expensive weed eradication efforts for species being promoted and sold in nurseries. The steering committee (consisting of representatives from stakeholder communities including horticultural industry, landscape architects and contractors, environmental non-profits, government agencies, and the gardening public) has tremendous potential to transform what we consider to be the inherently daunting nature of invasive species work.

An amazing part of the greater movement.

The recent December 1st California Biodiversity Council meeting on the state of invasive species management in California was well attended by leaders from agencies around the state. Some of the highlights included an instructive briefing by the Sudden Oak Mortality Task Force Chair, Mark Stanley, on how best to create a working task force. Nelroy Jackson provided his insights on forging state and national level invasive species direction. He expounded on how the National Invasive Species Council has worked – more specifically pointing out key ingredients for successful coordination. Larry Bezark (California Department of Food and Agriculture) provided an overview of the creation of the California Weed Management Plan – illustrating how major pieces of the puzzle would come together. The tradition of this Council is to create discrete action items from each meeting. As such, Crawford Tuttle of the California Resource Agency proposed a follow-up meeting for agency leads on January 24th with the goal of creating a strategy to better coordinate our diverse roles. Hopefully this strategy will facilitate a more structured coordination between the federal, state, and county agencies dealing with weeds.

Again...an amazing part of the greater movement.

I think all of these activities collectively are what could be the beginning of a new era in invasive species management for California. As in the latter stages of pulling together a jigsaw puzzle, when you move large groups together the target- the view of what needs to be done- becomes much more obvious. My message here is that as planning and collaboration hit the "right" stride, it will be important to be poised with what role we, as individuals and agencies, can play. Yes, indeed, I believe the time is now. ❖

California Noxious and Invasive Weed Action Plan

In 2003, the California Department of Food and Agriculture was approached by the California Invasive Weed Awareness Coalition (CALIWAC) to take a lead in producing the Weed Action Plan.

CALIWAC is a broad coalition of non-governmental groups including:

- CA Cattlemen's Association
- CA Farm Bureau Federation
- CA Native Plant Society
- The Nature Conservancy
- CA Invasive Plant Council
- Regional Council of Rural Counties
- CA Forest Pest Council
- Monsanto
- Dow Agro Sciences
- CA Ag Commissioners & Sealers Association

CDFA organized a steering committee and a summit was held in Sacramento with over 100 weed experts and stakeholders to discuss the plan. After reviewing many drafts of the plan, the final plan was released in September 2005. The Weed Action Plan has received many endorsements including the Secretary of Agriculture, A.G. Kawamura, and the Secretary of Resources, Mike Chrisman.

The Weed Action Plan lists 10 elements, including Leadership and Coordination, Prevention and Exclusion, and Early Detection and Rapid Response. Each element has two sections: 1) Comprehensive Needs, a blueprint for new resources, and 2) Selected Actions, a blueprint for new action under current resources.

Executive Summary

California has a serious weed problem that is getting worse. However, selected actions have been identified that will immediately be addressed by agencies, groups, and individuals to begin doing more with the resources at hand. Furthermore, this plan has identified comprehensive needs that if addressed, will enable some of the most serious impacts from noxious or invasive weeds to be minimized and prevented. Progress in implementing the plan will be evaluated on a yearly basis to ensure its recommendations are fulfilled. A continuation of the steering committee will monitor and facilitate implementation of the plan. The plan will need serious endorsements and directives to their staffs by secretaries, directors, and managers for the plan to be successful.

The PDF is available online at www.cdfa.ca.gov/weedhome.

E-mail kfilippini@cdfa.ca.gov to request a State Weed Plan. ❖

Legislative Update: NIWAW & S 144

continued from front page

NIWAW 7 was organized by the Invasive Weeds Awareness Coalition (IWAC), a Washington D.C.-based coalition dedicated to increasing awareness of invasive weed problems and the associated research and management needs.

United States Senate Bill 144 Federal Weed Management Funding

Senate Bill 144 passed last year as an amendment on the Plant Protection Act. Fifteen million dollars per year for six years nationwide was authorized and signed by the president. An appropriation was sought in the 2006 USDA budget through various lobbying efforts, but was not successful for the 2006 federal fiscal year beginning this September. USDA/APHIS may include money in their budget for 2007. Lobbying efforts were in place with National Invasive Weed Awareness Week in Washington DC. A delegation of 10 Californians, representing California Farm Bureau, California Weed Science Society, California Department of Food and Agriculture, California Invasive Plant Council, Monsanto, Audubon Canyon Ranch, California Native Plant Society, and the California Agricultural Commissioners and Sealers Association went to Washington, D.C. to lobby.

For more details, please visit the NIWAW 7 website: www.nawma.org/niwaw/niwaw_index.htm.❖

3rd Annual California Invasive Weeds Awareness Day

At The Capitol

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March 8, 2006

Weed workers from around the state met in Sacramento for the 2006 Weed Day at the Capitol! In the morning attendees heard about the latest agency developments, including invasive species coordination efforts through the Resource Agency's Biodiversity Council. In the afternoon participants split into teams for appointments with Senate and Assembly members' offices.

Assembly Bill 2479, a Weed Management Area funding bill, was introduced by Assembly Member Villines on February 23.

California Invasive Weeds Awareness Coalition (CALIWAC) is extremely grateful to those who traveled from southern California to attend this event!

Last year attendees met with two-thirds of the representatives' staffs, and left materials for the rest. Our message was heard – even in a difficult budget climate.

We reminded legislators that invasive and noxious weeds don't stop spreading!

Invasive Weeds Awareness Day at the Capitol is sponsored by the California Invasive Weeds Awareness Coalition, a partnership of private sector groups working to support and enhance existing weed control efforts and promote public awareness of invasive weed issues in California.

* Find your representatives at leginfo.ca.gov/yourleg.html and express your support for AB 2479!

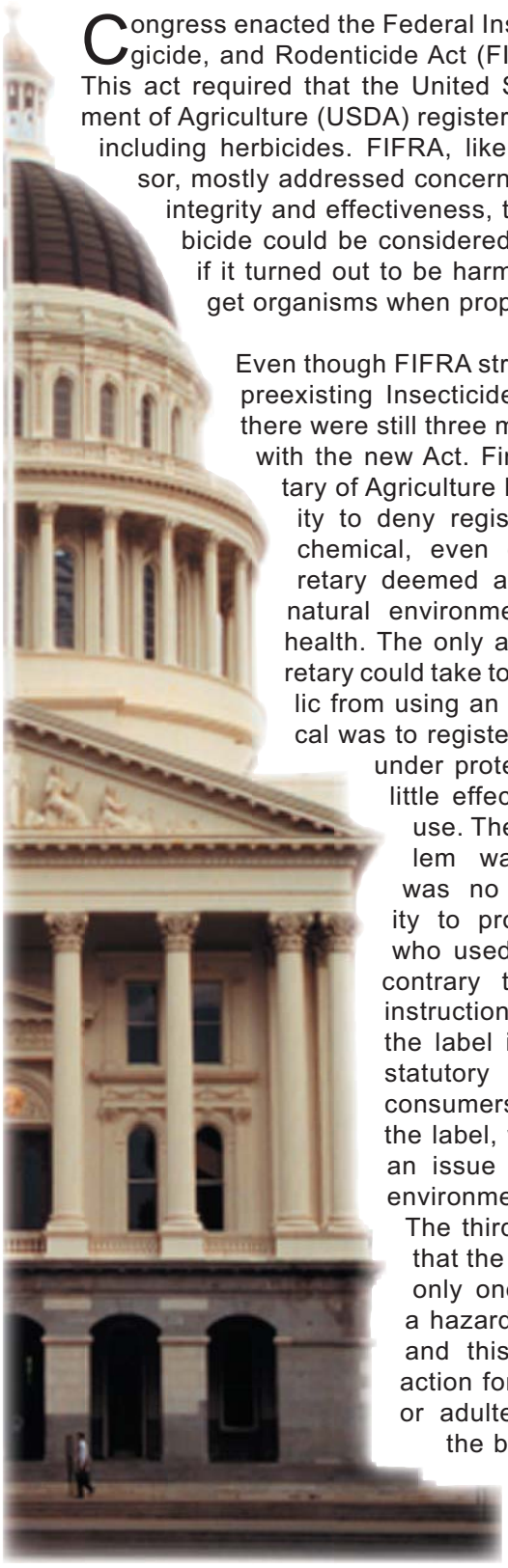
Photos by Bob Case.
Top: Aurelio Posadas, CDFA, summarizes WMA accomplishments.

Bottom left: In Washington, DC a week prior, CALIWAC received a spirit award. Nelroy Jackson presents the plaque to Bob Pickard, CALIWAC chair.

Bottom right: Andrea Fox, CA Farm Bureau, and Wendy West, UC Cooperative Extension, describe etiquette when meeting with legislators.

Herbicide Registration *for dummies*

Cheryl Woods, CDFA
and Robert Leavitt, CDFA



CDFA file photo

Congress enacted the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) in 1947. This act required that the United States Department of Agriculture (USDA) register all pesticides, including herbicides. FIFRA, like its predecessor, mostly addressed concerns with product integrity and effectiveness, though an herbicide could be considered "misbranded" if it turned out to be harmful to non-target organisms when properly used.

Even though FIFRA strengthened the preexisting Insecticide Act of 1910, there were still three major problems with the new Act. First, the Secretary of Agriculture had no authority to deny registration of any chemical, even one the Secretary deemed a threat to the natural environment or human health. The only action the Secretary could take to deter the public from using an unsafe chemical was to register the chemical under protest, which had little effect on sale and use. The second problem was that there was no legal authority to prosecute those who used the chemical contrary to the label's instructions. As long as the label itself met with statutory requirements consumers could ignore the label, which became an issue of public and environmental safety. The third problem was that the Secretary had only one way to fight a hazardous chemical, and this was a legal action for "misbranding or adulteration" where the burden of proof was on the government.

In 1962, following the publication of Rachel Carson's book, Silent Spring, the green movement began in earnest. Ms. Carson had particularly targeted pesticide use in her book, and the new movement followed suit, bringing pressure to Congress to further regulate pesticide use.

In 1964 the USDA persuaded Congress to resolve two of the issues with the first installation of FIFRA. First the Secretary was given the right to deny registration to any pesticides deemed unsafe and was given the right to revoke registration from existing registered compounds. Second, the burden of proof for a chemical's effectiveness and safety was transferred to the manufacturer instead of the government. These two amendments strengthened the act in theory, but in practice the bureau that was assigned these tasks was severely understaffed, and the cancellation right was rarely used until recently.

These new powers led eventually to a reevaluation of the registration of a number of pesticides including: DDT, aldrin-dieldrin, mirex and the herbicide 2,45-T.

On December 2, 1970, in response to the new interest, President Nixon signed an order creating the Environmental Protection Agency (EPA). Through this, the Office of Pesticide Programs was founded. The responsibility for registering pesticides was transferred from the Secretary of the USDA to the Administrator of the EPA.

The EPA immediately began reorganizing and amending the laws under its jurisdiction. The EPA required that all pesticides must be registered with the Agency; registration included a description of the complete formula for the product, a proposed label, and "full description of the tests made and the results thereof upon which the claims are based." In the case of a problem, the strongest action the Agency can take under the law is an emergency suspension of all sales, uses and distribution of the pesticide. Additionally, the Agency can require that all unsold product be collected from the marketplace.

More recently, FIFRA has been amended through the Food Quality Protection Act (FQPA) to address two additional deficiencies. First, the human risk assessments were conducted assuming that all exposure was to adults (70 kilogram human males). This ignored those segments of the population that might be more sensitive to pesticides, in particular children, infants, and pregnant women. The second problem was that herbicides and other pesticide residues were considered a 'food additive' in processed foods under the Federal Food, Drug,

and Cosmetic Act (FDCA) if the residues increased during processing, even though they were not inserted into foods intentionally. As food additives, pesticide residues were subject to the Delaney Clause of the FDCA. This clause imposed a 'zero tolerance' standard for food additives that caused cancer in humans or induced it laboratory animals, by any means of delivery and at any rate. As the science of analytical chemistry progressed, and chemists were able to detect residues at the part per billion level and below, it became obvious to most observers that this 'zero tolerance' standard was untenable.

The Food Quality Protection Act

In 1996, in response to food industry and other concerns, Congress passed the Food Quality Protection Act (FQPA) to amend FIFRA and FDCA. Under FQPA, EPA must follow additional criteria for the registration of pesticides, including new considerations of exposure for infants and children and consideration of all risks posed by pesticides with similar modes of action. Under FQPA, EPA must find that the pesticide poses a "reasonable certainty of no harm" before it can be registered. Additionally, FQPA amended FDCA to modify the definition of "food additive" to exclude pesticides. As amended, pesticides were removed from this list of banned additives to food as long as there was a "reasonable certainty of no harm" resulting from aggregate exposure to the pesticide chemical residue, including all anticipated dietary and other types of occupational or non-occupational exposure and all other exposures for which there is reliable information. Additionally, the Agency must determine any potential estrogenic effects that may result from exposure to the pesticide or its residues. FQPA mandates that the EPA and manufacturers include the risk to sensitive subgroups of the population, such as children and infants in their risk assessment. An additional 10-fold margin of safety was added as well to protect these sensitive subgroups, and incentives were created for the development and maintenance of "effective crop protection tools for American farmers." This latter step was enacted to address the potential loss of effective crop protection tool for crops too small to attract significant investment in new technology. Further this new statute also requires that pesticides be reregistered every 15 years to reevaluate the product in the light of new data and advances in scientific interpretation.

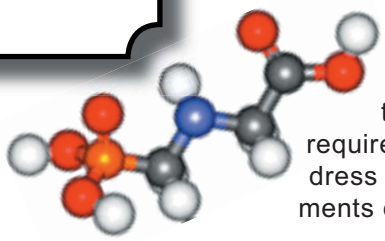
THE 4 GENERAL REQUIREMENTS FOR REGISTRATION UNDER FIFRA AND FQPA ARE:

1. **Its composition is such as to warrant the proposed claim for it**
2. **Its labeling and other materials required to be submitted comply with the requirements of this act**
3. **It will perform its intended function without unreasonable adverse effects on human health**
4. **When used in accordance with widespread and commonly recognized practice it will not generally cause unreasonable adverse effects on the environment.**

The Registration Process under FIFRA and the FQPA

A pesticide will only be granted registration if the determination is that it can perform its function without substantial risks to the public or the environment. Also, the EPA must approve all label language before a pesticide can be sold or distributed. The overall intent of the label is to provide clear directions for effective product performance while minimizing risks to human health and the environment. The label is a legal document and it is a violation of federal law to use a pesticide in a manner inconsistent with its labeling.

During the process for registering a chemical the EPA examines the ingredients of a pesticide, the site that the pesticide is used on, the amount and frequency of use, as well as the storage and disposal of the product. EPA also evaluates the product to ensure that there are not unreasonable health effects on humans, the environment, and non-target species. The Agency reviews three different categories of pesticides: antimicrobials, biopesticides, and conventional products. The registration process starts when a company submits an application for registration. This application includes all the studies required to address the requirements of FIFRA.



glyphosate molecule found in common herbicides

The review process can take several years but "reduced-risk conventional" pesticides may be completed in a little more than a year if reviewed as a work-share project with Canada. If the Agency determines that a significant question remains following the review of any study, additional studies are required to address that issue before a regulatory decision can be reached. Since many of the submitted studies take several years to conduct it is in the manufacturer's best interest to anticipate any possible regulatory need; a one-year delay in the chemical's registration can cost up to 20 percent of the total lifetime value of the product.

There may be anywhere from 120 to more than 150 individual studies that must be undertaken, and this could cost $60 to 80 million or more (Jachetta, John, Dow

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AgroSciences LLC, personal interview). The basic tests include acute toxicity (toxicity from short-term exposure), chronic toxicity (cancer and other long-term effects), teratogenicity (birth defects), mutagenicity (negative effects to chromosomes), effects to fish and wildlife, crop residues, non-target effects, and dissipation in the environment. These tests are in addition to basic product chemistry. There also is a fast-track approval process through a "public interest finding" via EPA's Reduced Risk Pesticide Initiative. The objective of EPA's Reduced-Risk registration process is to accelerate the registration and use of "lower-risk" pesticide products that may result in reduced risks to human health and the environment when compared to existing alternatives. To be considered for this type of expedited review, a Reduced Risk pesticide must accomplish at least one (several is better) of the following four objectives and must not fail in any category:

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- Reduce the risks of pesticides to human health
- Reduce the risks of pesticides to non-target organisms.
- Reduce the potential for contamination of groundwater, surface water or other valued environmental resources.
- Broaden the adoption of integrated pest management strategies, or make such strategies more available or more effective.

For example, the new product, amino pyralid (Milestone® Dow Agro Sciences LLC) is a new herbicide for the control of many invasive and noxious broadleaf weeds in rangeland, pasture, and roadsides that has been granted the Reduced Risk designation and accelerated registration. Amino pyralid has been determined by a panel of EPA scientists to be a Reduced Risk when compared to one or more of the current commercial standards in each of the above-mentioned criteria.

The regulation of pesticides has evolved as science and society has changed. Laws and regulations have become more complex as concerns about pesticide use have changed from product purity to human and environmental health. The most recent law impacting pesticide registration, the FQPA, has addressed many societal concerns by modifying previous laws as our understanding of pesticides and pesticide exposure has advanced, including the development of procedures and guidelines for the expedited review of Reduced Risk pesticides. However, the authors believe that it can be said with confidence that, as science and society continue to change, that laws and regulations regarding pesticides will continue to advance as well.

The California Department of Pesticide Regulation(DPR)

The State of California has regulated pesticides for more than 100 years. The first California pesticide law was passed in 1901. This law charged the Director of the Agricultural Experimental Station with ensuring the quality of an arsenic based chemical known as Paris green. After Congress passed the Federal Insecticide Act of 1910, California responded by passing parallel legislation, the State Insecticide and Fungicide Act of 1911, which, like its federal counterpart, primarily dealt with mislabeling and adulteration, but the California law went further and required pesticides to be registered with the University of California before they could be sold.

Then in 1921, with the passing of the Economic Poison Act, the responsibility for pesticide registration was transferred to the California Department of Agriculture [CDA, now called the California Department of Food and Agriculture (CDFA)], which had been created two years prior. This law expanded CDA's authority beyond insecticides and fungicides. The law was truly ahead of its time because it gave CDA the authority to control the manufacture, sale and use of pesticides. It also required manufacturers to supply information on how their product was formulated as well as a product sample for testing. In this system the Director could cancel or deny registration to those chemicals that did not meet the required standards.

In 1926, the public of Great Britain threatened an embargo on U.S. agriculture because some tests showed that fruit sent from the U.S. had residue of arsenic treatment. As a result, the U.S. Bureau of Chemistry (which soon became the U.S. Food and Drug Administration) set the first federal limits on the allotment of pesticide residues on harvested fruit. California went one step further with its 1927 legislation, the Spray Residue Act, which controlled residues of arsenic-based sprays. From there, more and more pesticides were added to the growing list of those under strict control.

In 1970, the state legislature passed the California Environmental Quality Act (CEQA), which greatly strengthened all environmental regulation in the state. It was subsequently determined that CEQA would require Environmental Impact Reports for all pesticide registrations. This brought pesticide registration to a temporary halt until the state's pesticide regu-

FIFRA *continued on page 16...*

Good Laboratory Practice Standards For Registration Tests

Robert Leavitt, CDFA

With the pesticide manufacturers conducting product testing, how is the quality and reliablity of the product ensured?

Whereas the US EPA requires product chemistry, environmental fate, and health and safety tests for registration on an herbicide or other pesticide, the registrant (manufacturer) usually conducts the tests, either in its own laboratories or by contract. This has lead many people to question the validity of the tests, based on the assumption that the registrant has a vested interest in the herbicide passing the tests. The US EPA has addressed this concern by requiring that all tests submitted to meet registration requirements meet a standard of excellence referred to as 'Good Laboratory Practice' (GLP) .

To insure the quality and reliability of product chemistry, environmental fate, and other registration tests, the US EPA published GLP standards in the Federal Register on November 29, 1983. These were then codified as 40 Code of Federal Regulations part 160 (soon to be 806) and went into effect in 1989. The US EPA published these standards in response to some registration tests submitted in the mid-1970s that "had been conducted so poorly that the resulting data could not be relied upon in EPA's regulatory decision-making process" (US EPA 1999).

GLP Standards, in summarized form, include the following requirements:

- Written protocols, reviewed and approved by the Registrant's management
- Calibrated instruments and processes
- Log books and maintenance logs
- Third party inspection of "critical" phases of each test
- Standard Operating Procedures
- Facility Inspections
- Approved methods
- Trained personnel
- Chain of Custody

The objectives of GLP standards are to improve the reliability and transparency of registration tests; to insure management participation in the process; and to insure the use of best available science. GLP standards are not science in and of themselves, but they are rather a quality control mechanism. Although GLP standards are regulations, in many ways they embody techniques and practices that should be followed by laboratories and field stations as a matter of course. According to Becky Sisco, Regional Field Coordinator of the United States Department of Agriculture's Western Region Inter-Regional Project 4, GLP documentation "has to tell the complete story of a trial in writing" (personal communication).

The "Chain of Custody," "Third party inspection," and "Testing facility inspections" may be the requirements that most directly address the concern about test validity in light of the registrant's perceived vested interest. The "Chain of Custody" requires that unique sample numbers and paperwork track each sample from planning, collecting in the field, analysis in the laboratory, to write up in the final report. "Third party inspections" are conducted by US EPA scientists and by Quality Assurance Officers. These inspectors verify that the registration tests are conducted according to the protocols, and that any deviations from protocol are clearly noted and explained. Quality Assurance Units (the compliance arm of the regulations) assure that all laboratories and field stations involved in GLP work meet certain standards of performance. Testing facilities are also routinely inspected by EPA Office of Compliance to insure compliance with these standards .

In summary, the US EPA requires that all registration tests for herbicides and other pesticides be conducted according to GLP standards. These standards insure that registration test data be reliable for decision-making purposes, and that the public can have confidence in the data. ❖

REFERENCES:

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An Active Weed Management Area, The Humboldt - Del Norte WMA

by Michelle Early, CDFA

The Humboldt-Del Norte Weed Management Area (HDWMA) is just one among a number of exceptional WMAs who are successfully collaborating with multiple partners and community members in their area, inspiring and furthering successful local weed management and land stewardship practices. Its partners include a diverse group of federal, state, county, and city organizations as well as non-profits, educational institutions, and private landowners. HDWMA is exceptionally good at incorporating integrated pest management, and alternative weed removal measures while advancing the interests of good land stewardship practices in its partner agencies. Presently the WMA is working with the BLM and Waipuna Ltd. to use a hot foam weed control unit on such invasive weeds as Bermuda buttercup. Hot foam weed control is organic, non-toxic and a safe alternative to herbicides.

HDWMA has an extremely organized and cohesive structure, tackling issues efficiently with the use of committees,

Purple Ragwort, © 2002 Dean Wm. Taylor

but it is mostly the cooperation and collaboration between the many skilled and educated members of its steering committee which makes the WMA so effectively organized. Its steering committee is comprised of multiple members, who, through frequent communication, ensure the early detection and rapid response to hazardous invaders in their area. Since its inception in 1999, HDWMA has received $131,510 in grants from Senate Bill 1740 and Assembly Bill 1168 as well as in-kind support of $26,200 from multiple agencies, and has treated over 1000 acres of weed infested land.

The Humboldt WMA began in 1999 with a first formal meeting in February and the beginning of a Memorandum of Understanding (MOU). By 2000 the MOU was finalized, as was their project criteria and strategic plan. Subsequently, they developed an invasive plant questionnaire and began a county wide mapping project, celebrating their first annual Weed Awareness Week in August of that year. From 2001 to 2003 they began control projects on yellow brush lupine, yellow starthistle, purple loosestrife, pampas grass, Scotch broom, Dyer's woad, capeweed, tansy ragwort, and spotted knapweed removing a total of 102 acres of weeds from SB 1740 grants alone. They utilized the aid of California Conservation Corps members and community volunteers to manually remove these weeds from certain sites and perform restoration projects.

Weed Identification Table at HDWMA's Weed Week

Major Partners

U.S. Bureau of Land Management, Arcata Field Office
U.S. Forest Service, Six Rivers National Forest
U.S. Fish and Wildlife Service, Humboldt Bay National Wildlife Refuge
National Park Service, Redwood National Park
California Department of Parks and Recreation, North Coast Redwoods District
California Department of Fish and Game, Region 1
California Department of Transportation, District 1
California Department of Food and Agriculture
Humboldt County
Natural Resource Conservation Service
Humboldt County Resource Conservation District
Humboldt Del-Norte Cattlemen's Association
UC Extension Service
California Native Plant Society, North Coast Chapter
Del Norte County
PALCO
North Coast F.O.R.E.S.T. Association
Friends of the Dunes
Manila Community Services District
Center for Natural Lands Management
City of Eureka
City of Arcata

Priority Weeds

from Humboldt-Del Norte Weed Management Area's
Strategic Weed Priority List

Freshwater Aquatic

creeping redtop
giant reed
Brazilian waterweed
leafy spurge
European frogbit
hydrilla
South American spongeplant
purple loosestrife
parrot feather
big knotweeds
hairy sickle grass
reed canary grass
Mediterranean rabbitsfoot grass

Wild/Urban Interface

butterfly bush
cotoneaster
Cape ivy
Spanish heather
English ivy
English holly
Himalayan blackberry
periwinkle
biddy-biddy
morning glory
Japanese knotweed, giant,Himlayan
sterile capeweed
Darwin's barberry
hedge bindweed
creeping St. Johnswort
red oxalis

Inland

Italian thistle
spotted knapweed
yellow starthistle
Canada thistle
bull thistle
Scotch broom
French broom
tansy ragwort
medusahead
fertile capeweed
meadow knapweed
gopher weed
Harding grass
diffuse knapweed
tocalote
tall fescue
velvet grass
Klamathweed

Coastal

European beachgrass
annual grasses
jubata (pampas) grass
iceplant
yellow bush lupine
fertile capeweed
coincya
Bermuda buttercup/sourgrass
redpurple ragwort
gorse
bellardia
fennel
Mediterranean mustard
smooth cat's ear
lesser hawkbit
bird's foot trefoil
yellow parentucellia

Aquatic/Brackish

dense flowered cordgrass
cordgrass hybrids
eel grass
spear-leaved salt brush
Bigelow's pickleweed

Yellow Bush Lupine © 2004 Brent Miller

Bellardia © 2005 Luigi Rignanese

Clara Sander, SCEP Botanist, using the Waipuna to control Bermuda buttercup.
Photo by Jennifer Wheeler, Botanist Arcata FO BLM and co-coordinator HDWMA.

Also from 2001 to 2003 the Humboldt WMA began several mapping projects including: purple loosestrife mapping along 20 miles of river; capeweed mapping on 4.7 acres of private land; and county wide mapping of over 600 miles of roadside surveys. Plus the WMA helped host a 2 day seminar on Chilean cordgrass, (*Spartina densiflora*), a highly invasive marsh species pervading mudflats around Humboldt Bay. Spartina converts mudflats into cordgrass jungles, altering the muddy terrain and out-competing native marsh species at higher elevations. In 2004 they developed a nursery and landscapers outreach program and began a new MOU to include Del Norte County which prompted the update of their strategic plan. Meeting locations are now on a rotating schedule due to the extensive size of the Weed Management Area.

They also began several educational projects which have continued until this year, including the annual California Weed Awareness Week, a Humboldt County Fair weed booth, and biannual meetings held in the Spring and Fall which feature guest speakers who present on weed removal methods, control, and mapping techniques. In 2000 a 14-page Humboldt County Weed Management Handbook, highlighting the top 27 priority weeds in Humboldt County, was produced. And recently, an "Escaped Garden Invaders" poster was created to be displayed alongside educational materials such as Cal-IPC's "Don't Plant a Pest" and HDWMA's "Green Gardening to Protect Biodiversity" brochures, at local Humboldt nurseries. Also, HDWMA recently completed a highly detailed weed prioritization spreadsheet, highlighting 71 of Humboldt's most invasive exotic weeds and prioritizing their control and management according to their invasive capability, and current spread (see figure above). One HDWMA partner, the Friends of the Dunes brings the cause of invasive weed eradication and native restoration home to the public quite effectively, offering "Ecosystem Restoration Team Workdays" three Saturdays a month, in which volunteers meet at a local coffee house, and carpool out to restoration sites to pull weeds and restore habitat in the Arcata area. The outreach efforts of HDWMA and its partners reveal a comprehensive WMA that takes seriously its duties as an educator and steward for good land practices and weed management in the Humboldt and Del Norte counties. ❖

Weed News Weed News Weed News

Caulerpa

by Gina Skurka
California Department of Food and Agriculture

Discovered in California in Carlsbad on June 12, 2000, *Caulerpa taxifolia* is a distinctively bright green alga known for spreading off the coast of Monaco. This weed was put on the fast track to the US Federal Noxious Weed List due to the history of problems in the Mediterranean Sea. Originally native to the southwestern Pacific, *Caulerpa taxifolia* was brought to Monaco as an aquarium plant. It was discovered to have escaped the aquarium and taken up residence in the Mediterranean Sea where it pushed out native plants in the area with its dense, Astroturf-like growth. In a matter of years it had covered a few square kilometers of the seabed, ridding the area of natural food sources for the fish and sea life of the area. Caulerpa reproduces asexually and readily proliferates, spreading on the currents.


CDFA File Photo

Caulerpa

Currently the eradication process is preformed by placing a tarp over the area and injecting chlorine (usually chlorine tablets) under the tarp in order to kill the plant. The eradication efforts here in California are going very well. In fact Dr. Lars Anderson plans to announce the eradication of *Caulerpa taxifolia* in late March.

For more information, visit the Southern California Caulerpa: www.sccat.net. ❖

Foxtail Restharrow

by Marc Lea
San Luis Obispo County Department of Agriculture

Late in the summer of 1998, an alert property owner in the Suey Creek area of San Luis Obispo County provided our office with a sample of an unknown weed invading her pasture. No one in our office was able to identify the plant, and subsequently, a specimen was sent to CDFA for determination. After some taxonomic wrangling, the plant was eventually identified as foxtail restharrow, *Ononis alopecuroides*, an annual legume native to southern Europe. Our office immediately began an eradication program, spurred on by three critical factors: this was the first time foxtail restharrow had been recorded on the North American continent, the plant was described as having weedy characteristics in its native range where it occasionally colonized disturbed areas, and finally, the infestation was currently less than an acre in size and definitely at an eradicable level.


Photo by Fred Hrusa

Foxtail restharrow

Since the initial find, we have conducted a local outreach effort in order to determine if other properties in the area are also infested. Fortunately, there remains only one known infestation of *Ononis alopecuroides*, now classified by CDFA as a Q rated noxious weed. In the ensuing seven years, we have utilized a variety of low-tech control methods, such as backpack herbicide applications and hand removal, in our effort to eradicate the

article continued on page 16...

Weed News Weed News Weed News

Perennial Sowthistle

by David Chang
Santa Barbara County Agricultural Commissioner's Office

The Santa Barbara County Agricultural Commissioner's Office reports that a noxious weed, marsh sowthistle, *Sonchus arvensis uliginosus,* a subspecies of perennial sowthistle, was discovered in 2004 in the vegetable fields west of Lompoc. Perennial sowthistle is an aggressive, hard-to-control weed that can reduce crop yields, increase management costs, and depreciate land values. It can also be a host to several economically important plant pests. Currently, in California, perennial sowthistle is only known to occur in Siskiyou and Modoc Counties, and now, Santa Barbara County. Perennial sowthistle reproduces by seed and underground roots. The seeds can be spread by the wind and also by sticking to fur, feathers, and clothing. Contamination of seed crops is an especially immediate concern as Lompoc's farmers are an important producer and exporter of flower and bean seed worldwide.

Photo by David Chang

Perennial sowthistle

For more information and to report perennial sowthistle sightings call us at (805) 681-5600 or our Lompoc field office at (805) 737-7733. ❖

Hydrilla

by David Kratville
California Department of Food and Agriculture

Hydrilla, *Hydrilla verticillata*, is an exotic aquatic plant, which has been a serious pest in the United States. Following its introduction into Florida in the early 1960s, hydrilla spread north from Florida to Washington, D.C. and west to Texas and California. If not controlled, hydrilla proliferates throughout the aquatic ecosystem impeding the use of water for recreational, agricultural, industrial or domestic purposes. Once hydrilla becomes established in an aquatic site, it spreads rapidly, out-competes and eventually replaces native vegetation and upsets the ecological balance required to maintain suitable fishery habitats. The California Department of Food and Agriculture (CDFA) has maintained an active program to eradicate hydrilla from California since 1976 when this noxious weed was first discovered in a 35 acre pond in Marysville.

Fluridone treated hydrilla, CDFA File Photo

Hydrilla

On March 22, 2005, hydrilla was detected in a fishing pond at the Nevada County Fairgrounds, near Grass Valley, Nevada County. This detection was the second detection of hydrilla in Nevada County in the past year following an infestation detected in a fire control pond at the McCourtney Road Transfer Station and Recycling Center, near Grass Valley, on July 21, 2004. To date the CDFA has made several applications of fluridone aquatic herbicide and has a water sampling program in place to monitor herbicide levels. ❖

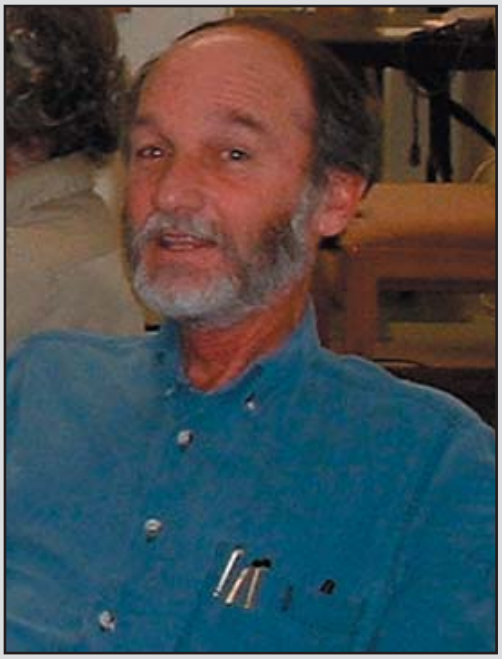
TRIBUTE TO ROSS O'CONNELL

By Robert Leavitt, CDFA

Ross was known to many of us as "Mr. Hydrilla." Though Ross has a successful career in vertebrate pest control for the State of California before entering into hydrilla eradication, most of us in weed control in California know Ross because he spent much of the last two decades working with hydrilla. In particular, Ross spent the last four years concentrating on eradicating hydrilla from Yuba and Nevada Counties in California. I don't think there were many who knew more about hydrilla and hydrilla eradication in California than did Ross.

I first met Ross when I was working with an experimental aquatic herbicide and was immediately impressed with dedication to aquatic weed management. At about the same time, Ross, Nathan Dechoretz, Tom Patrick, Denis Griffin and I worked on a perennial peppercress control project near Bishop. Then I had the privilege of working with Ross at the Department of Food and Agriculture for the past four and one-half years. Ross was my right arm for hydrilla eradication, just as he had been for Nathan Dechoretz for many years, and could always be counted on for technical advice and historical perspective.

I know that Ross was proud to be elected as 2005 Vice President and Program Chair for the Western Aquatic Plant Management Society. This was a great honor to him, an affirmation of his career, and a tribute from his peers. I'm glad he received this honor before he passed away.



I don't think that anyone who ever knew Ross didn't like his warm personality and offbeat sense of humor. He loved to go trout fishing in Nevada, gold prospecting, and to play the stock market and the penny slots.

Ross passed away peacefully on October 16, 2005 in Folsom, California from cancer. He was born in September 1952 in Sacramento, California, in the Tahoe Park district, and lived most of his life in the Sacramento area. He is survived by his wife, Patty, his mother, his brother, one son, two daughters, a granddaughter, and many friends.

Photo by Susan Donaldson at the Tahoe Weed Group subcommittee while working on their action plan in 2003.

Mail Order Weeds and Our Borders

By Cheryl Woods, CDFA

Mail Order Weeds

"Don't Pack a Pest!" This slogan, along with "Buy California Grown" covers many office walls, vehicles, and even luggage of the plant management programs at the California Department of Food and Agriculture (CDFA). Many years have passed since the "Don't Pack a Pest" campaign was issued. But how many people think about that slogan while surfing the Internet for their favorite purchases?

Researchers typed the names of several noxious aquatic weeds into the Yahoo search engine, and came up with nurseries and private sellers of each weed.

The Internet Experiment

In 2001 an article in *Journal of Aquatic Plant Management* was published following a research project concerning mail order and Internet purchases of invasive aquatic weeds. The study revealed that while physically transporting a weed in a car was in clear violation of our state border laws, the Internet and mail catalogs were not regulated as such. In the study, researchers typed the names of several noxious aquatic weeds into the Yahoo search engine, and came up with nurseries and private sellers of each weed.[1]

The Problem

While technically it is illegal to sell noxious weeds in California, there is no law forbidding their sale on a federal level or on the international market. When a producer is identified and is discovered to be selling these noxious weeds over the California border they are immediately notified that they are in violation of State law. This is extremely hard to ascertain because CDFA is not allowed to inspect UPS or US mail. Bails of hay and feedlot grains are much easier to regulate simply because of the process in which they are shipped. Large trucks are opened and a sample is taken of whatever plant material they might be transporting for inspection. The trouble lies in the private or small business sector.[2]

The California Invasive Plant Council's landscaping alternatives brochure. Visit www.cal-ipc.org.

"Don't Plant A Pest"

Unfortunately there are some noxious weeds that are very attractive to landscapers and aquarium owners. Due to the demand for these attractive weeds, some nurseries will carry those plants, knowingly or not. Additionally sometimes nurseries are misinformed of a plant's genus and do not even know that they are selling a noxious weed. That weed then goes on the Internet catalog and a consumer purchases that plant and could plant it right here in California. In this whole chain of events it could happen that not one of the people involved in this transaction will have known about the plant's true origin. This is a main reason for the Cal-IPC campaign "Don't Plant a Pest." Their brochures give landscapers native and non-invasive alternatives to noxious weeds, complete with color photographs of each for easy identification.

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A Federal Concern

In this struggle against mail order and Internet weeds California is not alone. There are initiatives being conducted on the federal level as well. According to Polly Lehtonen from the US Department of Agriculture's Animal and Plant Health Inspection Service (USDA-APHIS), "A system is being developed to detect references to Federal noxious weeds and other regulated items on the Internet. It's rather labor intensive, because people have to go through all of the hits and determine the context and try to figure out if a violation of the regulations is indicated. Many times a weed may be mentioned in the context of 'we don't sell this because it's a federal noxious weed,' or maybe the company is outside of the US and sells it only to buyers outside of the US."[3] Through the efforts of many, this slow process will soon see great results in keeping noxious weeds out of California.

Why Wasn't I Stopped at the Border Station?

California has been known for its strict codes of regulation when it came to agriculture and border control but with all the budget cuts our border spending has been spread thin. "Commercial vehicles are the true target, the risk level is higher and the funding isn't what it used to be." According to Roger Cline and Mark Stirling, Quarantine Officers with CDFA, because of funding shortages, the borders now only target the large commercial trucks carrying agricultural materials. Cline states that it is the hay that is infected with yellow starthistle that is the risk, not the woman bringing the flower arrangement with some French broom in the back seat of her car. So border funding has been allocated to places that need it most.[4]

Contact

If you encounter any illegal sale of noxious weeds please inform your Agricultural Commissioner or the Program Supervisor of Interior Pest Exclusion, Nick Condos at ncondos@cdfa.gov and they will send a letter of notification. ❖

References:

1. Hoyle, Steve T., and Stratford H. Kay. Mail Order, the Internet, and Invasive Aquatic Weeds. *Journal of Aquatic Plant Management.* 39:88-91.
2. Cline, Roger :Quarantine Officer, Nick Condos: Program Supervisor Interior Pest Exclusion, Mark Stirling: Quarantine Officer. Personal Interviews:11/1, 3/2005.
3. Lehtonen, Polly: USDA APHIS. Email Interview:10/20-27/2005.

Foxtail restharrow

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foxtail restharrow. Since the plant is an annual, we have concentrated our efforts on preventing seed production and have successfully eliminated all germinating plants for seven straight years. Of course, leguminous plants are notorious for their seed longevity, so it is difficult to predict just how many more years it will be before the seed bank, last replenished in 1998, is completely exhausted. Until that day arrives, we will maintain a long-term outlook, confident that each year of successful control brings us one step closer to the restharrow's eventual eradication. ❖

FIFRA

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latory system was overhauled and it was determined that the new system was the 'functional equivalent' of CEQA.In 1972, the CDFA began licensing Pest Control Advisers, requiring them to be trained and be involved in continuing education.

The year 1984 brought the Birth Defect Prevention Act that required all registered pesticides to have complete and adequate chronic health effects studies. Also passed was the Pesticide Contamination Prevention Act of 1984, which focused on the effects of pesticides in groundwater. In 1991, the Governor and Legislature transferred the regulation of pesticides from the CDFA to the newly created California Department of Pesticide Regulation, which is part of the California Environmental Protection Agency.

By dollar value, California produces more agriculture than any other state in the nation. Because California's crops are a large part of its economy, pesticides must in turn be held in high regard and under strict scrutiny. Since 2002, Pest Control Advisers have been required to take more college courses related to integrated pest management and sustainable agriculture, which shows that the state is looking to the future. Every state in the nation and many foreign countries receive crops from California, so higher standards are required to allow for export to these states and countries. California's laws are more stringent as a result of the high crop yield and demand. ❖

Refrences:

1. Cal EPA website: www.calepa.ca.gov
2. EPA website: www.epa.gov/opppsps1/fqpa
3. Plater, Abrams, Goldfare, Graham, Heinzerling, Wirth. *Environmental Law and Policy: Nature, Law, and Society.* Aspen Publishers. New York, NY, 2004.

Toolbox: Noxious Weed Washer

Mobile Vehicle Decontamination Unit

TOOLBOX highlights new tools that might integrate well into local weed management tool boxes. Noxious Times *does not specifically endorse tools featured, but rather strives to provide baseline data that will lend itself to further examination and research on the part of the user.*

In order to reduce the transportation of noxious weeds and seeds by vehicles leaving infested areas, it was necessary to develop a portable vehicle washer that would effectively remove these materials from the underbody, wheels and wheel wells of these vehicles.

The first "Noxious Weed Washer" was developed and fabricated by USFS Missoula Technology Development Center in 2002 for cleaning vehicles involved in fire fighting.

Although patterned after the "Missoula Washer," this improved washer does a better job. Fully self-contained on a 22 ft utility trailer, it can be anywhere in the state in a matter of hours. Powered by an 18 horsepower Honda engine driving a 750 lb/in^2 diaphragm pump feeding two five-nozzle turbo-jet underbody washers and two hand held spray wands, it makes short work of even the largest vehicles. All wash water is collected on a hazardous materials containment mat and recycled through a series of settling tanks and filters to be used again.

Bob Schweitzer is listed with the U.S. Central Contractor Registration (CCR), on contract with CDFA, and available for any need in the state. ❖

For more information contact;
Bob Schweitzer, KNB SALES
(559) 739-0676
knbsales@earthlink.net

Educational Tools: Books, Brochures, and CD-ROM

Offered by the California Invasive Plant Council (Cal-IPC)

BROCHURES:

- Don't Plant a Pest Brochure: Bay Area
- Don't Plant a Pest Brochure: Southern California
- Don't Plant a Pest Brochure: Central Coast
- Don't Plant a Pest Brochure:Trees of California
- Biological Pollution: What you should know about invasive plants in California

CD-ROM:

- **Grasses and Grass-like Weeds**
  by Dr. Joseph M. DiTomaso

PUBLICATIONS:

- **The Weed Worker's Handbook**
  Published by the Watershed Project and Cal-IPC
- **Aquatic and Riparian Weeds of the West**
  by Dr. Joseph M. DiTomaso and Evelyn A. Healy
- **Invasive Plants of California**
  Editors: Carla C. Bossard, John M. Randall, Marc C. Hoshovsky

All proceeds from the sale of Cal-IPC merchandise funds Cal-IPCs' work to protect California's wildlands from invasive plants.

For more information visit:
www.cal-ipc.org

California Conservation Corps Attacks Arundo

John Griffith, CCC crew supervisor, relates a recent experience battling Arundo.

There were a couple weeks in July that were so hot, tying an iceberg to my back and ducking under a shady tree seemed a much better idea than eradicating invasive weeds. But after remembering what *Arundo donax* was doing to the Russian River Watershed -- pushing out native vegetation essential for wildlife and creating a botanical monoculture -- I was ready to start sweating.

> *"Most of the young men and women on my crew could already recognize arundo...*
> *Yet, before they joined the CCC, only few were aware of how destructive the plant was."*
>
> *-John Griffith*

My crew of ten young adults was ready too. They joined the California Conservation Corps (CCC) to do hard and rewarding work. Eradicating arundo definitely qualified.

We met our project sponsor from Circuit Riders along the river not far from Ukiah. The riparian area there had been reduced to a thin strip because of an annually expanding vineyard. Among the remaining oaks, box elder and cottonwoods were vigorous stands of arundo. Armed with loppers we attacked. The strategy was to cut each giant reed to a stub, haul the stalks to the side of the road and lay them into piles. The Circuit Riders planned to return in the fall to paint the stubs with herbicides and burn the piles.

Most of the young men and women on my crew could already recognize arundo, having seen it growing along riverbanks and ditches all over California. Yet, before they joined the CCC, only few were aware of how destructive the plant was. Our sponsor explained that even a piece of the rhizome could eventually create a sprawling stand. With such a small percentage of California's original riparian habitats remaining, we all understood the importance of our project.

Removing nonnative weeds teaches the young men and women in our program a variety of ecological realities. It demonstrates the deleterious effects that humans can have on the ecosystem by introducing invasive species. It also shows them that something can be done about it. Who better to restore the environment than those who will inherit it? We can't wait to attack arundo again!

-John Griffith, Conservationist
Ukiah Center, CCC

Working on a mighty patch of Arundo donax.

In July of 2005, thanks to the efforts of the California Conservation Corps, three acres of arundo were cut down along the Russian River.

The CCC is a workforce development program that offers young men and women the chance to serve their state and become employable citizens through life skills training and hard work in environmental conservation, fire protection, and emergency response. With 24 residential and non-residential training centers throughout the state, the CCC provides an opportunity for communities throughout California to benefit from the hard work, public service, and educational training carried out by its knowledgeable staff and crews.

The CCC has extensive experience in invasive species eradication efforts. To have the CCC help YOU, please call:

(916) 341-3241 ❖

Greetings from the Siskiyou-Klamath Bioregion Working Weed Group

By Bernadette Cooney

Nine community-based groups and tribes located in rural forest communities of northern California and southern Oregon have come together to learn from each other effective non-chemical weed control strategies, refine monitoring protocols, develop programs that engage community volunteers and hire economically disadvantaged people to address weeds on public and private lands.

The Siskiyou-Klamath Bioregion Working Weed Group (WWG) is a collaboration consisting of the following organizations; Alliance for Forest Workers and Harvesters, California Indian Basketweavers Association (CIBA), California Alternatives to Pesticides (CATS), Collaborative Learning Circle (CLC), Forest Action Committee (FAC), Hoopa Tribal Forestry, Mid-Klamath Watershed Council, Salmon River Restoration Council (SRRC), and Trinity County Resource Conservation District (TCRCD).

As the name implys, this group represents the Siskiyou-Klamath bioregion spanning four northwest counties located in N. California and S. Oregon. This unique bioregion encompasses an internationally recognized diversity of plants and animals which are being threatened by the encroachment of invasive plants. Through the development of non-chemical methods of weed control, the Working Weed Group, has enabled rural forest communities to pull together across ownership boundaries for the successful control of weeds commonly thought of as extremely difficult to accomplish. The Working Weed Group provides hope to those individuals and groups that seek to control weeds successfully using a grassroots approach.

The WWG is working towards facilitating a greater awareness of land management agencies that weed control can be accomplished successfully through partnerships with communities. Their efforts have not been without toil, the WWG has had to overcome many obstacles. The scarcity of funding to support efforts to educate, advocate and facilitate the utilization of non-chemical weed control measures ranks number one in this group. Another major obstacle has been the lack of recognition by land-management and state agencies that weed control can be achieved through a grassroots approach.

Basketweavers often place the collected grasses in their mouths while constructing the intricate baskets. Indian populations impacted from spraying are thought to be too small to obtain sufficient data records needed for an epidemiological study.

Weed eating goat

The success stories are numerous within the WWG. Various non-chemical methods that have been tried include: burning, mulching, mowing, digging, application of black plastic and biocontrols and the use of goats. The Salmon River Restoration Council, www.srrc.org, a highly accomplished group, has achieved what many have thought impossible. This group is on the ground proof that an informed, dedicated small group of people can make a significant difference. The Salmon River Restoration Council receives help from all ages towards the control/eradication of noxious weeds through a proven strategic plan comprised of 13 action steps:

- **1** Cooperation/Coordination
- **2** Planning
- **3** Education/Outreach
- **4** Prevention
- **5** Mapping/Assessment
- **6** Adaptive Management
- **7** Groundwork
- **8** Inventory/Tracking
- **9** Revegetation
- **10** Monitoring
- **11** Evaluation/Recommendations
- **12** Support
- **13** Reporting

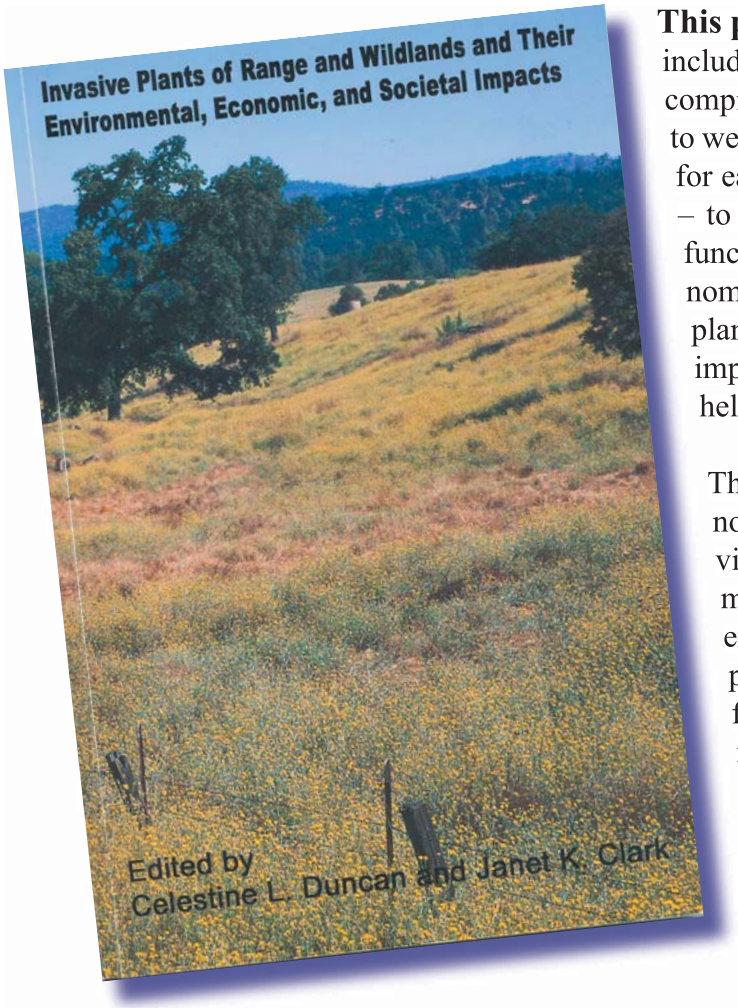
Another group that has been a harbinger of non-chemical weed control is the Forestry Action Committee, forestryaction@cavenet.com, located in southern Oregon. Their strategies have enabled pulling together across public/private property lines in the Illinois Valley to reduce spotted knapweed populations by 95% in one year using hand tools and black plastic. Both of these highly successful groups have incorporated educational and volunteer programs to engage the community in weed control on both public and private land.

The WWG has put together a list of potential funding agencies for anyone who is currently involved in weed control or would like to get involved. To receive a list of granting agencies that support alternative methods of weed control or to ask for a speaker for your group, call the Trinity County Resource Conservation District at (530) 623-6004. ❖

ResourcesResourcesResources

Invasive Plants of Range and Wildlands and Their Environmental, Economic and Societal Impacts.

Edited by Celestine L. Duncan and Janet K. Clark. - A comprehenisve literature review.



This paperback summarizes literature on 16 invasive plants, including 13 species found in California. Information was compiled from published literature and a questionnaire sent to weed managers to provide updated distribution information for each species. The book focuses on summarizing impacts – to livestock and wildlife, plant communities, community function, soil and water resources, human health, and economics. Though little economic data exists for many of these plants, the book's summary of existing studies performs an important function by establishing the foundation that will help researchers identify data gaps.

The book is not meant as a taxonomic guide, and there are no photographs, but illustrations. However, this book provides a concise review of a few key species of interest to many land managers, and is a valuable reference for scientists, weed control specialists, resource planners, and policy makers. The lengthy citation list for each species forms a good foundation for researchers or those wanting more detailed information.

For more info visit: timssnet.allenpress.com/ECOM-WSSA/timssnet/products/tnt_products.cfm.

Weed Manager's Guide : www.fs.fed.us/eng/rsac/invasivespecies

Geospatial technologies such as remote sensing and geographic information systems (GIS) can reduce costs and increase the efficiency and effectiveness of weed management programs for certain weeds. This site provides information, technical guidance, and resources to help resource managers learn to use these technologies to predict weed invasion, map and monitor weeds, and educate the public about weeds. It also discusses integrating geospatial technologies into a weed management plan and using geospatial technologies to help implement the USDA Forest Service National Strategy and Implementation Plan for Invasive Species Management.

ResourcesResourcesResources

LA County Weed Management Area
Report on Best Management Practices for Vegetation Management

photo by Sergio Lubezky

As presented by Dean Lehman at the California Weed Science Society Conference
January 16, 2006

The LA County Weed Management Area (WMA) supports integrated vegetation management plans. The WMA decided to prepare a report on Vegetation Best Management Practices (BMPs) due to a growing community concern regarding the use of herbicides; conflicting information regarding herbicides; a growing trend to ban the use of herbicides; and increased cost to manage vegetation when faced with budget and staffing constraints.

The report aims to educate individuals, businesses, government agencies, politicians and all types of property owners on all of the currently known methods of vegetation management, effectiveness of each technique, cost safety, and potential environmental impacts for all methods. The report covers vegetation control methods, the pros and cons of each method, and the sites or types of land use where these methods are suitable.

The committee to write the report consisted of a diverse group including representatives from: CA Dept. of Pesticide Regulation, UC Co-operative Extension, LA County Dept. of Public Works, LA County Agricultural Commissioner, Caltrans, USDA Forest Service, Team Arundo, Southern Californians Against Toxins, and Monsanto. The committee agreed to disagree.

California is the most regulated state regarding the use of herbicides and the California Department of Pesticide Regulations must investigate each incident or report of a problem with pesticides. Therefore, most problems with the use of herbicides are due to non-regulated users, i.e. private property owners.

The Vegetation Management BMP report has been completed and was approved by the LA County WMA on September 29, 2005. The committee will continue to update and revise the report. Also, the committee is working to obtain grants to proceed with pilot projects to develop accurate costs and measurable efficiencies for various means of vegetation control.

The report is available at the website: acwm.co.la.ca.us. Follow the Invasive Weeds tab on the left side of the screen, then download "BMP for Vegetation Management" tab. ❖

WEED MODELS!!

You can order life-like silk weeds (officially called weed models) at www.weedcenter.org

(under Resources: CIPM Resources and Publications). They've been great as a visual "get attention" piece!

Weeds Across Borders

Weeds Across Borders 2006 in Hermosillo, Sonora, Mexico May 25-28, 2006

We are becoming increasingly aware of the ecological and economic damage caused by non-native invasive species in North America. In the American southwest, African buffelgrass (*Pennisetum ciliare*) is rapidly invading the paloverde-saguaro, Sonoran desertscrub in Arizona and northern Sonora, and the succulent-rich Chihuahuan desertscrub in the Big Bend of Texas. Native species are decimated by intense competition with this robust grass, and the introduction of fire as a new ecological process into fire-intolerant desert ecosystems.

Considering that highways are one of the most common dispersal corridors for non-native plants, the U.S. Department of Transportation's Federal Highway Administration (FHWA) has a broad interest in them. In 2002, the FHWA and the U.S. Federal Interagency Committee for the Management of Noxious and Exotic Weeds (FICMNEW) organized a Weeds Across Borders Conference at the Arizona-Sonora Desert Museum in Tucson, Arizona. Participants learned about interesting and exciting efforts to control and manage non-native species in Canada, Mexico, and the United States. Weeds Across Borders 2004 in Minneapolis reinforced international cooperation and highlighted the non-native species activities in Minnesota, including several successful biological control programs.

African buffelgrass
photo taken by:
Barry A. Rice /The Nature Conservancy

"Native species are DECIMATED by INTENSE COMPETITION with this ROBUST GRASS, and the introduction of FIRE as a NEW ECOLOGICAL PROCESS into fire-intolerant desert ecosystems."

We are proud to announce that the 2006 Weeds Across Borders Conference unity continues. The 2006 conference, sponsored by FHWA, FICMNEW and the Arizona-Sonora Desert Museum among others, will be held in Hermosillo, Sonora, Mexico, May 25-28. The meeting will be an important opportunity for scientists, practitioners, and policy makers from natural resource, agriculture, and transportation agencies and non-governmental organizations to share information. Groups from the local, state, and federal levels of all three nations will share information on control and management methods in combating exotic plants. And all this will be done in unique cultural setting. We would like to invite you to participate in this event.

More information about the conference is available at:
www.desertmuseum.org or
borderweeds@desertmuseum.org

Please join us in Hermosillo!

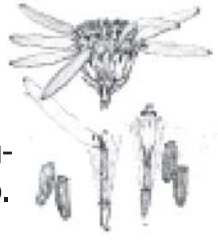
Thomas R. Van Devender
Senior Research Scientist
Arizona-Sonora Desert Museum ❖

Do You Know: Dyer's Woad

History of Dyer's Woad

by Cheryl Woods, CDFA

In the mid 15th and 16th centuries the counties of Toulouse and Albi in France enjoyed a great wave of prosperity due to a plant called dyer's woad. This plant was often used for its medicinal properties, when it was found that it produced a blue dye. Blue dye at this time was greatly desired by the growing middle class and was very expensive to procure. So the woad was harvested, the leaves crushed, and the matter rolled into balls and left to ferment. After a period of a few months the balls were squeezed and a thick blue dye was excreted. The demand for this product was so great that the counties of Toulouse and Albi were subsequently called the land of plenty. But with the onset of religious war and the discovery of indigo, which was cheaper than woad, the land of plenty soon became more poor. However, the remnants of that prosperous time are still evident today in the counties of the land of plenty, in the construction of their fine houses and the monuments to their prosperous crop. ❖



Present Status of Dyer's Woad

by Carri Pirosko, CDFA

Dyer's woad has infested large portions of Siskiyou County. In the late spring, seas of yellow can be seen impacting agricultural lands. This noxious weed has had a long time to become established since its introduction years ago. Fortunately this noxious weed has not yet invaded all of Siskiyou County, although each year it continues to threaten areas not yet infested. The local farm adviser and County Agricultural Commissioner's Office have been conducting research trials to determine the best treatment methods to combat this pest. Utilizing their research results, treatments and eradication efforts have been undertaken in lesser-infested parts of the county.

Dyer's woad has achieved a strong foothold in several locations in Modoc County and to a lesser extent in Lassen County. Movement of seed on equipment is the main culprit in the spread to and within these areas. Beyond these infested areas, aggressive detection and eradication programs are in place. When a single plant is found in adjacent areas and bordering counties, by California Department of Food and Agriculture's Noxious Weed Program biologists and weed partners, it is eradicated immediately. This aggressive noxious weed is a huge threat to agricultural and wildland areas as evidenced by its impact over the years in several core areas of Siskiyou County, as well as in other Western States. ❖

Upcoming Events

California Native Grasslands Association

16th Anniversary Annual Conference

May 4-6, 2006

"Grassland management and restoration, it's not just about grasses any more..."

Chico, CA

www.cnga.org/calendar.php

April 5-7, 2006
12th Annual California GIS Conference
Santa Barbara, CA
www.calgis.org

April 24-27
Noxious Weed Management Short Course
Chico Hot Springs Pray, MT
Melissa Brown, (406)558-4568
writemlb@yahoo.ca

May 3, 2006
Humboldt - Del Norte WMA biannual meeting
Location to be announced
Contact: mforys@humboldt1.com

May 4, 2006
Waipuna Training
BLM office Arcata
Contact: mforys@humboldt1.com

May 25-28, 2006
Weeds Across Borders
Hermosillo, Sonora, Mexico
www.desertmuseum.org/borderweeds
borderweeds@desertmuseum.org

15th Australian Weeds Conference
Sept 24-28, 2006

"Managing Weeds in a Changing Climate"

Adelaide, South Australia
www.plevin.com.au/15AWC2006

Advertise your upcoming events! Notify us at noxtimes@cdfa.ca.gov

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